

CLAIMS

1. An ultrasonic imaging apparatus comprising:  
an ultrasonic probe that receives and sends ultrasonic waves from/to an object;  
ultrasound image structuring means that generates an ultrasound image on the basis of a reflected echo signal received by the ultrasonic probe;  
elastic image structuring means that obtains a physical quantity of the elasticity of the object of a region corresponding to the ultrasound image on the basis of the reflected echo signal and generates a color elastic image;  
display means that overlays the ultrasound image to the color elastic image, or arranges the ultrasound image and the color elastic image and displays the resultant image on a screen; and  
input means that variably sets a corresponding relationship between a hue of the color elastic image displayed on the screen and the level of a physical quantity.

2. An ultrasonic imaging apparatus according to Claim 1, wherein the corresponding relationship between the hue of the color elastic image and the level of a physical quantity set by the input means is displayed on the screen with a color bar.

3. An ultrasonic imaging apparatus according to Claim 2, wherein, with the color bar, a large physical quantity and a small physical quantity are displayed with different hues and the boundary between the hue having the large physical quantity and the hue having the small physical quantity is displayed with another hue.

4. An ultrasonic imaging apparatus according to Claim 3, wherein the boundary between the hue having the large physical quantity and the hue having the small physical quantity is movably formed with the input means.

5. An ultrasonic imaging apparatus according to Claim 2, wherein a boundary region of the hue different from the hue of the periphery is settably formed at an arbitrary position of the color bar with the input means.

6. An ultrasonic imaging apparatus according to Claim 1, wherein the color elastic image is displayed alternatively a larger region or a smaller region than the setting physical quantity with a set hue.

7. An ultrasonic imaging apparatus according to Claim 1, wherein the color elastic image has a peripheral region

including a setting value of the physical quantity with the hue different from the hue of another region.

8. An ultrasonic imaging apparatus according to Claim 7, wherein the hue of the peripheral region has a tone in accordance with the level of the physical quantity.

9. An ultrasonic imaging apparatus according to Claim 1, wherein the elastic image structuring means comprises:

a color conversion table that is rewritable and sets a relationship between the level of the physical quantity and the color of the color elastic image;

calculating means that a physical quantity of the elasticity of the object of a region corresponding to the ultrasound image on the basis of the reflected echo signal and; and

color image generating means that reads the color corresponding to the obtained physical quantity from the conversion table and generates a color elastic image indicating the distribution of physical quantities, and

wherein the color conversion table is rewritten in accordance with the instruction input from the input means.

10. An ultrasonic imaging apparatus according to Claim 9, wherein the elastic image structuring means displays, on

the screen of the display means, a color bar indicating a corresponding relationship between the level of the physical quantity and the hue of the color elastic image, set to the color conversion table.

11. An ultrasonic imaging apparatus comprising:

an ultrasonic probe that receives and sends ultrasonic waves from/to an object;

ultrasound image structuring means that generates an ultrasound image on the basis of a reflected echo signal received by the ultrasonic probe;

elastic-image structuring means that obtains a physical quantity of the elasticity of the object of a region corresponding to the ultrasound image on the basis of the reflected echo signal and generates a color elastic image; and

display means that overlays the ultrasound image to the color elastic image, or arranges the ultrasound image and the color elastic image and displays the resultant image on a screen,

wherein the physical quantity is a strain or an elastic modulus calculated from the amount of motion of the tissue, and the display means displays a color bar indicating a correspondence between the hue of the color elastic image and the strain or the elastic modulus.

12. An ultrasonic imaging apparatus according to Claim 11, wherein a character indicating the assignment of the hardness of the color elastic image is displayed around the color bar.